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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,909	07/08/2003	Juan Yu	9432-000239	7929

27572 7590 04/19/2005

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EXAMINER

ANANTHANARAYANAN, RAMYA

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/614,909	YU ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ramya Ananthanarayanan	2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☒ Claim(s) 7-11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

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1. Claims 1-36 have been examined.

***Claim Objections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 7 -11 recite the limitation "the method of claim 7" in line 1. There is insufficient antecedent basis for this limitation in the claim. The limitation seems to be a typographical error, with the intent of limiting claims 7-11 to a dependency on claim 6 rather than claim 7. The examiner will treat the claims as dependent on claim 6.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-8, 10, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Birrell et al. (U.S. Patent 5,805,803).

6. With respect to claim 1, Birrell et al. disclose a method for establishing communication in a network comprising:

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Determining communication data of a first network peer at a first tunnel (column 4, lines 13-17: It is inherent that if a lookup service is able to communicate which protocol to use in communication with a network peer, that the protocol has been determined and registered with the lookup service.);

Registering the communication data with a lookup service (column 4, lines 13-17: It is inherent that if a lookup service is able to communicate which protocol to use in communication with a network peer, that the protocol has been determined and registered with the lookup service.););

Receiving a communication request from a second network peer at the lookup service (column 4, lines 5-12);

Providing the communication data of the first peer to the second peer (column 4, lines 13-17).

7. With respect to claim 2, Birrell et al. disclose a method wherein communication data is at least one of a communication address, firewall restrictions, tunnel protocol, and a port (column 4, lines 13-17).

8. With respect to claim 3, Birrell et al. disclose a method further comprising authenticating the communication request at the lookup service (column 2, lines 33-37).

9. With respect to claim 4, Birrell et al. disclose a method wherein the communication request includes a certificate indicative of the second peer (column 2, lines 37-41).

10. With respect to claim 5, Birrell et al. disclose a method wherein authenticating the communication request includes providing a tunnel identifier to the second network peer in response to the certificate (column 2, lines 49-55).

11. With respect to claim 6, Birrell et al. disclose a method further comprising creating a message queue for the first network peer (item 143: It is inherent in a proxy server to have a message cache or queue).

12. With respect to claim 7, Birrell et al. disclose a method further comprising adding the communication request to the queue (item 143: A proxy server inherently intercepts messages.).

13. With respect to claim 8, Birrell et al. disclose a method wherein the message queue is a proxy queue (item 143).

14. With respect to claim 10, Birrell et al. disclose a method wherein creating the message queue includes creating the message queue at a location of the lookup service (item 143, Figure 1).

15. With respect to claim 13, Birrell et al. disclose a method further comprising sending a message from the second network peer to the first network peer based on the communication data (column 4, lines 47-49).

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16. Claims 1, 12-23 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Nessett et al. (U.S. Patent 6,055,236).

17. With respect to claim 1, Nessett et al. disclose a method for establishing communication in a network comprising:

Determining communication data of a first network peer at a first tunnel (column 12, lines 67 to column 13, lines 1-7; column 15, lines 63-67);

Registering the communication data with a lookup service (column 12, lines 67 to column 13, lines 1-7);

Receiving a communication request from a second network peer at the lookup service (column 26, lines 18-21; column 13, lines 54-57);

Providing the communication data of the first peer to the second peer (column 23, lines 3-5; column 22, lines 42-51).

18. With respect to claim 12, Nessett et al. disclose a method wherein the second network peer includes a second tunnel (column 4, lines 7-9).

19. With respect to claim 13, Nessett et al. disclose a method further comprising sending a message from the second network peer to the first network peer based on the communication data (column 23, lines 20-23).

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20. With respect to claim 14, Nessett et al. disclose a method for dynamically selecting a tunnel protocol in a network comprising:

Determining protocol data of a first network peer at a first tunnel (column 12, lines 67 to column 13, lines 1-7; column 15, lines 63-67);

Registering the protocol data with a lookup service (column 12, lines 67 to column 13, lines 1-7);

Receiving a communication request from a second network peer at the lookup service (column 26, lines 18-21; column 13, lines 54-57);

Providing the protocol data of the first peer to the second peer (column 23, lines 3-5; column 22, lines 42-51);

Selecting a tunnel protocol at the second peer according to the protocol data (column 23, lines 20-23); and

Sending a message from the second peer to the first peer according to the tunnel protocol (column 23, lines 20-23).

21. With respect to claim 15, Nessett et al. disclose a method further comprising:

Selecting a second tunnel protocol at the second peer (column 26, lines 18-21); and

Sending a second message from the second peer to the first peer according to the second tunnel protocol (column 26, lines 18-21).

22. With respect to claim 16, Nessett et al. disclose a lookup service in a network comprising:

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A first tunnel module that acquires communication data of a network peer (column 12, lines 67 to column 13, lines 1-7; column 15, lines 63-67);

A registration table that stores the communication data (column 12, lines 67 to column 13, lines 1-7); and

A second tunnel module that sends a communication request to the registration table, acquires the communication data from the registration table, and sends a communication attempt to the first tunnel based on the communication data (column 26, lines 18-21; column 13, lines 54-57; column 23, lines 3-5; column 22, lines 42-51; column 23, lines 20-23).

23. With respect to claim 17, Nessett et al. disclose a lookup service further comprising a discovery module that acquires the communication data (column 12, lines 67 to column 13, lines 1-7).

24. With respect to claim 18, Nessett et al. disclose a lookup service further comprising a registration module that registers the communication data with the registration table (column 12, lines 67 to column 13, lines 1-7).

25. With respect to claim 19, Nessett et al. disclose a lookup service wherein the communication data includes at least one of a logic name, a unique identifier, a communication address, a port, a communication protocol, and service capabilities (column 12, lines 67 to column 13, lines 1-7).



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26. With respect to claim 20, Nessett et al. disclose a lookup service wherein the communication request includes a certificate indicative of the second tunnel module (column 31, lines 47-67 to column 32, lines 1-10).

27. With respect to claim 21, Nessett et al. disclose a lookup service wherein the registration table sends a tunnel identifier to the second tunnel in response to the certificate (column 31, lines 47-67 to column 32, lines 1-10).

28. With respect to claim 22, Nessett et al. disclose a lookup service wherein the communication attempt includes the tunnel identifier (column 31, lines 47-67 to column 32, lines 1-10).

29. With respect to claim 23, Nessett et al. disclose a lookup service wherein the first tunnel verifies the tunnel identifier with the registration table and accepts the communication attempt (column 31, lines 47-67 to column 32, lines 1-10).

30. With respect to claim 36, Nessett et al. disclose a lookup service wherein the second tunnel module selects a tunnel protocol for the communication attempt according to the communication protocol (column 23, lines 20-23).

***Claim Rejections - 35 USC § 103***

31. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

32. Claims 9, 11, 24-33 and 35 rejected under 35 U.S.C. 103(a) as being unpatentable over Nessett et al. (U.S. Patent 6,055,236) in view of Birrell et al. (U.S. Patent 5,805,803).

33. Nessett et al. and Birrell et al. are analogous art because both are in the field of secure electronic communication.

34. With respect to claim 24, Nessett et al. disclosed the limitations of claim 16, upon which claim 24 is dependent. Nessett et al. do not disclose a lookup service wherein the first and second tunnels include a cache.

Birrell et al. disclose a lookup service wherein the first and second tunnels include a cache (item 143: It is inherent in a proxy server to have a message cache or queue.).

35. It would have been obvious for one of ordinary skill in the art at the time of the invention to have combined the teachings of Birrell et al. with the teachings of Nessett et al. because it is well-known in the art to use a proxy server to intercept messages to provide security and caching to a network system ([http://www.wcape.school.za/handbook/tcpip2.htm#Proxy\\_servers](http://www.wcape.school.za/handbook/tcpip2.htm#Proxy_servers)).

36. With respect to claim 25, Nessett et al. do not disclose a wherein the cache stores the communication data.

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Birrell et al. disclose a lookup service wherein the cache stores the communication data (item 143: It is inherent in a proxy server to have a message cache of the recent messages that have been sent or received, and the communication data is sent and received by network devices that use the proxy server as a go-between. As disclosed above, the communication data is retrieved from the registration table where it is stored.).

37. The motivation for combining the teachings of Birrell et al. and Nessett et al. have been disclosed above.

38. With respect to claim 26, Nessett et al. do not disclose a wherein the cache retrieves the communication data from the registration table.

Birrell et al. disclose a lookup service wherein the cache retrieves the communication data from the registration table (item 143: It is inherent in a proxy server to have a message cache of the recent messages that have been sent or received, and the communication data is sent and received by network devices that use the proxy server as a go-between. As disclosed above, the communication data is retrieved from the registration table where it is stored.).

39. The motivation for combining the teachings of Birrell et al. and Nessett et al. have been disclosed above.

40. With respect to claim 27, Nessett et al. disclosed the limitations of claim 16, upon which claim 27 is dependent. Nessett et al. do not disclose a lookup service further comprising a message queue.

Birrell et al. disclose a lookup service further comprising a message queue (item 143: It is inherent in a proxy server to have a message cache or queue).

41. It would have been obvious for one of ordinary skill in the art at the time of the invention to have combined the teachings of Birrell et al. with the teachings of Nessett et al. because it is well-known in the art to use a proxy server to intercept messages to provide security and caching to a network system ([http://www.wcape.school.za/handbook/tcpip2.htm#Proxy\\_servers](http://www.wcape.school.za/handbook/tcpip2.htm#Proxy_servers)).

42. With respect to claim 28, Nessett et al. do not disclose a lookup service wherein the message queue is a proxy queue.

Birrell et al. disclose a lookup service wherein the message queue is a proxy queue (item 143: It is inherent in a proxy server to have a message cache or queue).

43. The motivation for combining the teachings of Birrell et al. and Nessett et al. have been disclosed above.

44. With respect to claim 29, Nessett et al. do not disclose a lookup service wherein the message queue stores communication attempts.

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Birrell et al. disclose a lookup service wherein the message queue stores communication attempts (item 143: A proxy server inherently intercepts messages.).

45. The motivation for combining the teachings of Birrell et al. and Nessett et al. have been disclosed above.

46. With respect to claims 9 and 30, Nessett et al. do not disclose a lookup service wherein the message queue is located remotely from the network peer.

Birrell et al. disclose a lookup service wherein the message queue is located remotely from the network peer (item 143, Figure 1: Because the tunnel endpoint contains a proxy server, each tunnel endpoint thus has a message queue.).

47. The motivation for combining the teachings of Birrell et al. and Nessett et al. have been disclosed above.

48. With respect to claim 31, Nessett et al. do not disclose a lookup service wherein the message queue is located at the first tunnel module.

Birrell et al. disclose a lookup service wherein the message queue is located at the first tunnel module (item 143, Figure 1).

49. The motivation for combining the teachings of Birrell et al. and Nessett et al. have been disclosed above.

50. With respect to claim 32, Nessett et al. do not disclose a lookup service wherein the message queue is located at the second tunnel module.

Birrell et al. disclose a lookup service wherein the message queue is located at the second tunnel module (item 143, Figure 1: Because the tunnel endpoint contains a proxy server, each tunnel endpoint thus has a message queue.).

51. The motivation for combining the teachings of Birrell et al. and Nessett et al. have been disclosed above.

52. With respect to claim 33, Nessett et al. do not disclose a lookup service further comprising a message queue server that creates the message queue.

Birrell et al. disclose a lookup service further comprising a message queue server that creates the message queue (item 143: It is inherent in a proxy server to have a message cache or queue, Figure 1).

53. The motivation for combining the teachings of Birrell et al. and Nessett et al. have been disclosed above.

54. With respect to claims 11 and 35, Nessett et al. do not disclose a lookup service wherein the registration table tracks the location of the message queue by storing a location of the message queue.

Birrell et al. disclose a lookup service wherein the registration table tracks the location of the message queue by storing a location of the message queue (column 12, lines 67 to column 13, lines 1-7; column 15, lines 63-67: The table stores the locations of each device on the network, of which the proxy server is one device.).

55. The motivation for combining the teachings of Birrell et al. and Nessett et al. have been disclosed above.

56. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nessett et al. (U.S. Patent 6,055,236) and Birrell et al. (U.S. Patent 5,805,803) in view of Mei et al. ("Turning an HTTP Proxy Server into a Wireless Internet Gateway").

57. Nessett et al., Birrell et al. and Mei et al. are analogous art because both are in the field of secure electronic communication.

58. With respect to claim 34, Nessett et al. and Birrell et al. do not disclose a lookup service wherein the message queue server creates the message queue at a request from the network peer. Mei et al. disclose a lookup service wherein the message queue server creates the message queue at a request from the network peer (Section 2.1).

59. It would have been obvious to have combined the teachings of Mei et al. with the combined teachings of Nessett et al. and Birrell et al. because it is well-known in the art at the time of the

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invention that proxy server caches are operated this way and HTTP proxies are the most effective and adopted way to reduce response times of servers (Section 2.1).


### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramya Ananthanarayanan whose telephone number is (571) 272-5860. The examiner can normally be reached on Monday through Friday, 8:30 -5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RA

  
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SUPERVISORY PATENT EXAMINER  
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1. A method for establishing communication in a network comprising:
  - Determining communication data of a first network peer at a first tunnel;
  - Registering the communication data with a lookup service;
  - Receiving a communication request from a second network peer at the lookup service;
  - Providing the communication data of the first peer to the second peer.
2. The method of claim 1 wherein communication data is at least one of a communication address, firewall restrictions, tunnel protocol, and a port.
3. The method of claim 1 further comprising authenticating the communication request at the lookup service.
4. The method of claim 3 wherein the communication request includes a certificate indicative of the second peer.
5. The method of claim 4 wherein authenticating the communication request includes providing a tunnel identifier to the second network peer in response to the certificate.
6. The method of claim 2 further comprising creating a message queue for the first network peer.
7. The method of claim 6 further comprising adding the communication request to the queue.
8. The method of claim 6 wherein the message queue is a proxy queue.
9. The method of claim 6 wherein creating the message queue includes creating the message queue at a server remotely located from the first network peer.
10. The method of claim 6 wherein creating the message queue includes creating the message queue at a location of the lookup service.
11. The method of claim 6 further comprising tracking the location of the message queue at the lookup service.
12. The method of claim 1 wherein the second network peer includes a second tunnel.
13. The method of claim 1 further comprising sending a message from the second network peer to the first network peer based on the communication data.
14. A method for dynamically selecting a tunnel protocol in a network comprising:
  - Determining protocol data of a first network peer at a first tunnel;
  - Registering the protocol data with a lookup service;
  - Receiving a communication request from a second network peer at the lookup service;

Providing the protocol data of the first peer to the second peer.  
Selecting a tunnel protocol at the second peer according to the protocol data; and  
Sending a message from the second peer to the first peer according to the tunnel protocol.

15. The method according to claim 14 further comprising:

    Selecting a second tunnel protocol at the second peer; and  
    Sending a second message from the second peer to the first peer according to the second tunnel protocol.

16. A lookup service in a network comprising:

    A first tunnel module that acquires communication data of a network peer;  
    A registration table that stores the communication data; and  
    A second tunnel module that sends a communication request to the registration table, acquires the communication data from the registration table, and sends a communication attempt to the first tunnel based on the communication data.

17. The lookup service according to claim 16 further comprising a discovery module that acquires the communication data.

18. The lookup service according to claim 16 further comprising a registration module that registers the communication data with the registration table.

19. The lookup service according to claim 16 wherein the communication data includes at least one of a logic name, a unique identifier, a communication address, a port, a communication protocol, and service capabilities.

20. The lookup service according to claim 16 wherein the communication request includes a certificate indicative of the second tunnel module.

21. The lookup service according to claim 20 wherein the registration table sends a tunnel identifier to the second tunnel in response to the certificate.

22. The lookup service according to claim 21 wherein the communication attempts includes the tunnel identifier.

23. The lookup service according to claim 22 wherein the first tunnel verifies the tunnel identifier with the registration table and accepts the communication attempt.

24. The lookup service according to claim 16 wherein the first and second tunnels include a cache.

25. The lookup service according to claim 24 wherein the cache stores the communication data.

26. The lookup service according to claim 25 wherein the cache retrieves the communication data from the registration table.
27. The lookup service according to claim 16 further comprising a message queue.
28. The lookup service according to claim 27 wherein the message queue is a proxy queue.
29. The lookup service according to claim 27 wherein the message queue stores communication attempts.
30. The lookup service according to claim 27 wherein the message queue is located remotely from the network peer.
31. The lookup service according to claim 27 wherein the message queue is located at the first tunnel module.
32. The lookup service according to claim 27 wherein the message queue is located at the second tunnel module.
33. The lookup service according to claim 27 further comprising a message queue server that creates the message queue.
34. The lookup service according to claim 33 wherein the message queue server creates the message queue at a request from the network peer.
35. The lookup service according to claim 27 wherein the registration table stores a location of the message queue.
36. The lookup service according to claim 19 wherein the second tunnel module selects a tunnel protocol for the communication attempt according to the communication protocol.